

WISELR: Wisconsin Shape Editor for Local Redistricting

WISCONSIN STATE LEGISLATURE
LEGISLATIVE TECHNOLOGY SERVICES BUREAU - GIS
OCTOBER, 2015

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What is WISE-Decade?

WISE-Decade is a suite of mapping tools developed by the Legislative Technology Services Bureau (LTSB) that will assist counties and municipalities with legislative and legal requirements required by state statutes. These applications will help streamline and simplify these required processes, such as local redistricting and census data program participation.

What is WISELR?

WISELR is a web-based tool within the WISE-Decade platform to create local redistricting plans. The WISELR application is meant to allow county and local officials to easily edit and redraw their boundaries, create and manage different redistricting plans as well as share these plans with others. The application is primarily set up for County Supervisory Districts and Ward creation; however, by using the Custom plan type, a user may draw any geographic boundary type with accurate demographic statistics. These plans may include aldermanic districts, school districts, sewage districts, water districts or any type of district where population is important!


Using WISELR

- To use WISELR you must first log into the WISE-Decade website, which was formerly cbas.wisconsin.gov:
 - wisedecade.legis.wisconsin.gov
- The user name is your county name
 - Please note that spaces are underscores “_”, and periods have been removed
 - i.e. “St. Croix” county has a user name of: “St_Croix”
- The password has been distributed to each Land Information Officer and County Clerk.
 - If the password has been misplaced, please contact LTSB.
- The credentials are to be shared with anyone they allow to use the system, using the same credentials.



Once you are logged in you will see a splash page with the different modules, click on the upper right pane with the “WISELR” label in the upper left.

Once inside the WISELR pane you will see your county’s current wards displayed in various colors. On the left-hand side of the map you will see a pane with different information and buttons that will allow you to redraw districts.

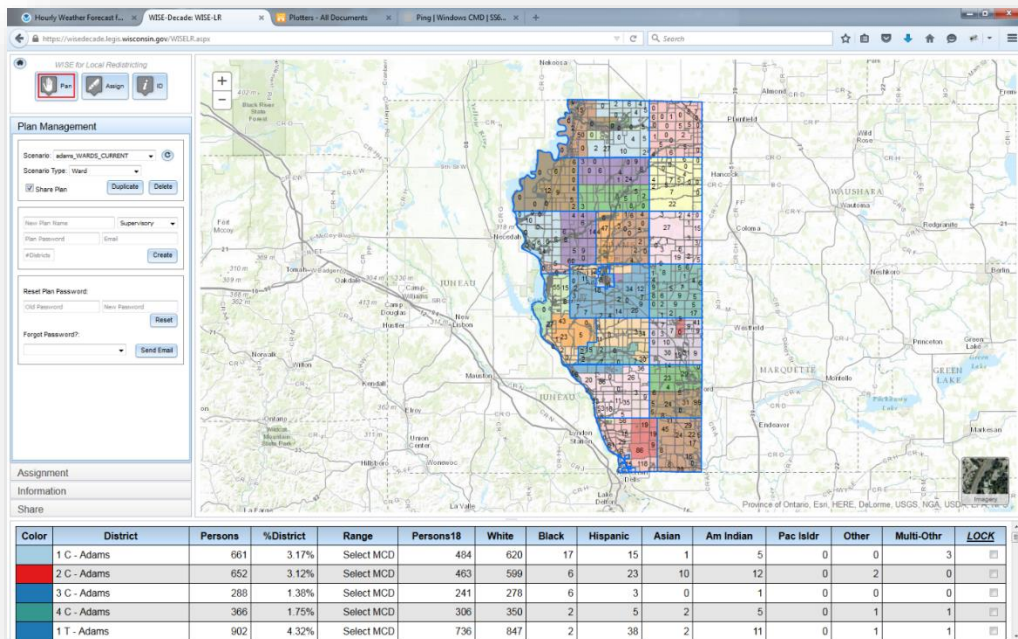
At the very top of this pane are several buttons, the home button  will take you back to the WISE-Decade splash page, while the other three buttons change what your mouse clicks will do on the map:

- Pan: Allows you to grab and pull yourself around the map when you click.
- Assign: Discussed below in the Assignment section, will allow you to assign, or unassign, a block.
- ID: Allows you to click on a specific block to view more detailed attributes about that block.

The components of the individual panes below these buttons will be discussed below in regard to the local redistricting workflow. To open up the other panes, simply click on the titles of the other panes to open them up.

The table below the map shows demographic information of the different districts, as well as, what color they are in the map.

Note that you can make this table larger by clicking and dragging the top of the table upward. You can also click on individual districts within this table to zoom to that district and bring that row to the top of the table.



The screenshot shows the WISELR application interface. On the left is a 'Plan Management' sidebar with buttons for 'Pan', 'Assign', and 'ID'. Below these are fields for 'Scenario Name', 'Scenario Type', and 'Plan Name'. The main area is a map of Wisconsin with districts colored in various shades. At the bottom is a table with demographic data for the districts.

Color	District	Persons	%District	Range	Persons18	White	Black	Hispanic	Asian	Am Indian	Pac Islr	Other	Multi-Othr	LOCK
1 C - Adams	661	3.17%	Select MCD	484	620	17	15	1	5	0	0	3		
2 C - Adams	652	3.12%	Select MCD	463	599	6	23	10	12	0	2	0		
3 C - Adams	288	1.38%	Select MCD	241	278	6	3	0	1	0	0	0		
4 C - Adams	366	1.75%	Select MCD	306	350	2	5	2	5	0	1	1		
1 T - Adams	902	4.32%	Select MCD	736	847	2	38	2	11	0	1	1		

Plan Management

The plan management pane facilitates the selection and creation of plans, as well as password changes. This is the place where a user will start within the application.

- Scenario Pane
 - Scenario:
 - Select an existing plan to open
 - Default Plans of Current Districts
 - “<county>_<PLANTYPE>_CURRENT”
 - Where <county> is the county in which you are signed in, and <PLANTYPE> is “WARDS” or “SUPERVISORY”.
 - By default, the first plans are the “CURRENT” plans, as they are the current supervisory districts or ward boundaries, as of the 2011 redistricting cycle.
 - All plan names are visible to all users within the county; however, if they are password protected, a password will be required to view the plan.
 - Scenario Type:
 - Currently, there are three types of plans that can be created, each with special features. All of the plans are constructed using census blocks, which is to say that all plans are “drawn on blocks”.
 - Ward
 - A “Range” field is added to the attribute table of a ward plan to indicate the statute required population range in which the wards for the selected municipality must fall within, which is based on total population of the municipality.
 - Drawing restricted to municipal boundaries
 - Supervisory
 - Will indicate deviation and percentage of the district based on the set district count. If no district count is set, these numbers will be based on the number of districts drawn.
 - Custom
 - Similar in functionality to the Supervisory plan, except districts are not titled as such.

The screenshot displays the 'Plan Management' window. At the top, there's a 'Scenario' dropdown set to 'adams_WARDS_CURRENT' with a refresh icon. Below it is a 'Scenario Type' dropdown set to 'Ward'. A 'Share Plan' checkbox is checked, and 'Duplicate' and 'Delete' buttons are present. The middle section is for creating a new plan, with fields for 'New Plan Name', 'Supervisory' (dropdown), 'Plan Password', 'Email', and '#Districts', followed by a 'Create' button. The bottom section is for password management, including 'Reset Plan Password' with 'Old Password' and 'New Password' fields and a 'Reset' button, and a 'Forgot Password?' section with a dropdown and a 'Send Email' button. At the very bottom, there are three tabs: 'Assignment', 'Information', and 'Share'.

- Changing a plan's type will clear the plan
 - #District:
 - Available only for Supervisory or Custom plan types
 - This is where you may set the district count for the plan. Deviation and district percentages will be based on this count.
 - If no district count is set then the statistics will be based on the number of districts that have been drawn, which will be updated as districts are added or subtracted.
 - Share Plan
 - By default, all plans are not shared
 - Checking this box will add the plan to the "Import Shared Plans" dropdown in the "Share" tab. This will allow other users from the county to create a new, empty plan, and then import your shared plan's assignments into it. This gives other users to work on a copy of your shared plan, without altering the original.
 - Duplicate
 - To create a new plan the user has two options, duplicate or create new. If you duplicate an existing plan using the duplicate button, this creates a new plan using the plan in the "Scenario" box as the starting point
 - The new plan will have all the same assignments as the plan that was duplicated.
 - You will be prompted for a new plan name, and a new password
 - Delete
 - Deletes the plan in the "Scenario" box
- New Plan Pane
 - New Plan Name
 - By default, all plans will be named "<county>_" + what is entered in this name box
 - This name will be visible to all others within your county
 - New Plan Type
 - See Scenario Pane > Scenario Type for information on plan types
 - Plan Password
 - Not required, but recommended. This will prevent other users within your county from viewing your plan.
 - There are no password complexity restrictions
 - Email
 - Not required, however, a valid email is required for any plan with a password
 - #Districts
 - Available only for Supervisory or Custom plan types
 - This is where you may set the district count for the plan. Deviation and district percentages will be based on this count.
 - If no district count is set then the statistics will be based on the number of districts that have been drawn, which will be update as districts are added or subtracted.
 - Create
 - To create a new plan from scratch, with no blocks assigned, click this button.
 - If you have not entered a plan name, or entered a password without an email, you will be prompted to do so at this time (a password is optional).

- Once you have created new plan, the plan will appear in the “Scenario” dropdown, and should be automatically loaded
 - Next Step: Click on the “Assignment” tab to bring up the assignment pane.
- Reset Password Pane
 - Reset Plan Password
 - *Corresponds to the plan currently selected in the “Scenario” dropdown*
 - Old Password
 - Enter the original password, OR the reset password that has been emailed to you from the “Forgot Password” button.
 - New Password
 - Enter a new password
 - Reset
 - If the old password is the original password, OR the reset password, the password will be set to the new password
 - Forgot Password?
 - Select your plan from the dropdown and click “Send Email”. In a few moments you will receive an email at the address given for the plan, with a one-time password key.
 - The reset password will become invalid once it has been used to reset the password.

Assignment

The “Assignment” pane is where all of the assignment tools are found. Assignment refers to assigning blocks, the small areas that comprise wards and supervisory districts, to an individual district or ward. When drawing supervisory districts, you will work at the county level, dividing the entire county up into supervisory districts. When drawing wards, ward boundaries must lie within municipality boundaries, so your focus will be on each individual municipality.

Once you have set which district or ward number you are going to assign and you have selected either “Supervisory” or, if you have a ward plan, a municipality, you can begin to assign blocks to districts. To do this, make sure the “Assign” button at the top-left of the screen is selected, and then you can click on the map to assign blocks to the selected district.

You may click in one spot to select just one location or you can click and drag to select a larger area. As you assign blocks you will notice that table at the bottom of the screen changes; the population (“PERSONS”) column will increase as will the values in the other columns of demographic data.

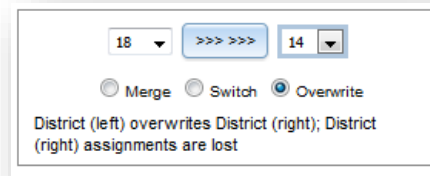
Pay attention to the column titled “%District”, this will tell you what percentage of the population is within that district. If the plan type is supervisory you will see a column titled “Dev” which gives the percent deviation from ideal, the ideal value being the population of each district if evenly distributed through every district. If the plan type is wards then instead of “Dev” you will see a column titled “Range” which gives the statutorily required range of population for each ward in the selected municipality, based on that municipality’s total population. (See <http://cdm16831.contentdm.oclc.org/cdm/ref/collection/p16831coll2/id/1275> for more specifics about the statute requirements.)

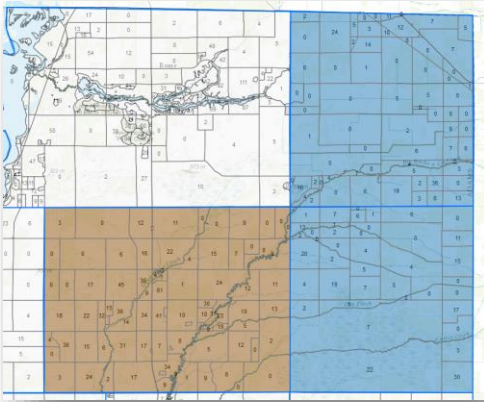
Also in this table you will see a column title **“LOCK”** and a checkbox for each district. If a checkbox for a district is checked then that district cannot be overwritten, that is once it has been assigned to a district it will not be changed. You can still add blocks to that district, just not blocks from other locked districts.

The “Assignment” pane is divided into four different parts. In the top part are the basic tools for assigning blocks to districts, nearly all of the assignments will likely be made in this section.

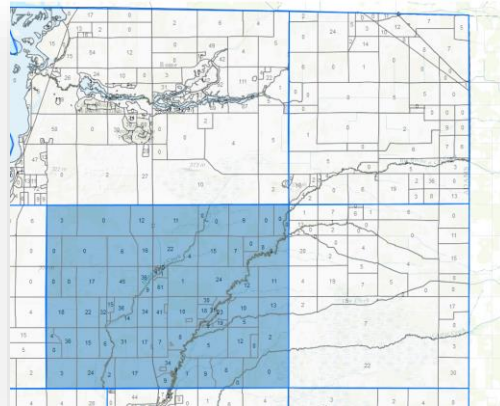
- Assignment Tools Pane
 - Assign/Unassign Dropdown
 - The contents of the first dropdown depend on if you are drawing supervisory districts or if you are drawing ward boundaries.
 - Supervisory (2 Options)
 - “Not Assigned”
 - Set to unassign blocks
 - “Supervisory”
 - Set to assign blocks
 - Ward
 - “Not Assigned”
 - Set to unassign blocks
 - Select to view all wards of a county at once
 - A Municipality
 - Set to the desired municipality to start drawing its wards.
 - By selecting a municipality you are selecting the municipality whose wards you will drawing
 - Only the wards of this municipality will be visible in the map, *however*, all assignments do still exist.
 - District Number Dropdown
 - The selected district number to be drawn
 - Selecting this number will select this district in yellow within the attribute table if it currently exists
 - District Color
 - Select the color of the district. You may change the color at any time.
 - Assign MCD
 - If Ward Plan
 - This will assign all the blocks of the municipality to the specified ward
 - If Supervisory Plan
 - Select the municipality from the dropdown at the left, and this will assign the entire municipality to the selected district
 - Assign by Ward

- While this is checked, blocks are grouped into their 2011 ward boundaries, and any assignments will be made at a ward level.
 - This means if a single block is selected with the “Assign” tool, all of the blocks of the ward in which this block belongs, will be assigned as well.
 - The 2011 ward boundary lines will be added to the screen when this checked.
- Opacity Pane
 - Slide the bar to change the opacity (transparency) of the assignments.
 - 100% will be filled entirely, 0% will not be visible
- Assignment Help Tool Pane
 - Zoom: District
 - Zoom to selected district
 - Zoom: Unassigned
 - Zooms to an unassigned block
 - Clear Plan
 - Clears all assignments in the plan
 - Undo Assign
 - Undo assignments in order of assignments.
 - Limit to 5 undo’s
 - Assign Unassigned
 - Assign all unassigned blocks to selected district.
 - Toggle All Locks
 - Toggles a plan’s district locks
 - First locks all unlocked districts and then, if clicked again, will unlock all districts
- District Transfer Pane
 - All of these actions cannot be undone!!
 - Merge
 - Add all of the left district’s assignments to the right district’s assignments
 - For example, if you wanted to transfer all of district 7 to district 1, you select district 7 from the dropdown on the left and 1 from the dropdown on the right, then click the button between the two dropdown menus
 - Switch
 - Switch the assignments between the two specified districts
 - For example, district 1 would become district 2, and district 2 would become district 1.
 - Overwrite
 - The district selected on the right will have the assignments of the district selected on the left, while the blocks already assigned to the district on the right will be lost.
 - For example, district 18 (on the left, brown) will now be district 14 (on the right, blue), and anything that was assigned in district 14, will be removed.





Before Overwrite



After Overwrite

Information

The “Information” pane contains ancillary data to help the user make decisions when drawing districts.

- Show Overlay
 - Checking the box will allow you to select a demographic category to overlay on the map.
 - Use the opacity bar below the demographic category dropdown to adjust the transparency of the overlay
 - Data source is the 2010 Census
 - Red is a high count, and green is a low count. These figures do not represent density adjusted to population
- Show 2011 Districts
 - Overlay the districts drawn during the 2011 redistricting cycle
 - Click Show 2011 District Labels to label the districts
- Show Population Labels
 - On by default. This will provide a number by each block of Persons
- Show MCD Labels
 - Label municipal boundaries

Share

The “Share” pane contains tools designed to help you import other plans or export your current plan. The first section has two buttons, one for import and another for export. You have three different options for import and export formats. These options

Plan Management

Assignment

Information

☐ Show Overlay: Persons

0%

50%

100%

☐ Show 2011 Districts: Wards

☐ Show 2011 District Labels
 ☒ Show Population Labels
 ☐ Show MCD Labels

Share

are meant to be a way to view plans off of the website as well as a mechanism for saving plans or “bookmarking” the current stage of the plan.

- Import and Export
 - Data Content
 - Block ID
 - Census Block ID
 - Import Field Name Options
 - GEOID10
 - GEOID
 - Assignment
 - Import Field Name Options
 - DISTRICT
 - DISTRICTS
 - Import Assignment Data Format Requirements
 - Wards
 - “<WARD#>
<Municipal Type Letter> - <Muni Name>”
 - i.e. “2 C – Madison”
 - <WARD#> -
Numeric ID, i.e. 2
 - <Municipal Type Letter> - C, T or V for City, Town or Village
 - <Muni Name> -
Municipal Name, i.e. Madison
 - Supervisory
 - “Supervisory District <District Number>”
 - i.e. “Supervisory District 2”
 - Import Data
 - Must be of the type specified. For example, if importing a Plan Boundary, the file must be a shapefile.
 - The data must be in a ZIP file.
 - Types
 - Block List (.CSV)
 - Comma-delimited values files with the block ID and the assignment.

The screenshot shows a web interface titled "Plan Management" with a sidebar containing "Assignment", "Information", and "Share". The "Share" section is active and contains two main areas. The top area has radio buttons for "Export" (selected) and "Import", followed by a dropdown menu set to "Block List (.CSV)". Below this is a text input field for "Notification Email" and a "Submit" button. The bottom area is titled "Import Shared Plans" and features a dropdown menu with "adams_WARDS_CURRENT" selected and an "Import" button.

- Blocks (.SHP)
 - A shapefile of blocks with each block assigned to a district.
- Boundary (.SHP)
 - A layer of just the district or ward boundaries
- Import Shared Plans
 - If a user from your county checks the box “Share Plan” in Plan Management > Scenario, the plan’s name will appear in this drop down.
 - If you want to obtain a copy of a shared plan, create a new plan of the shared plan type, and then click Import. This will import all of the assignments of that plan into your new plan.
 - Note that this will completely replace all the current assignments in your plan when you import a plan.

Attribute Table

- Clicking the divider at the top of the table, and dragging will adjust the size of the table
- Selecting a district will zoom to that district, and push it to the top of the table
- Hovering over demographic information will reveal the percent population of that demographic compared to the other districts. For example, if when hovering over the Asian cell for Supervisory District 1, in a blue bubble, the user can see the number 37.0%. That means that 37% of the Asian population of the county (or municipality if it was a ward plan) is within Supervisory District 1.
- Hovering over a column will reveal a tooltip with a longer, more clear field name
- LOCK Column
 - Clicking the “LOCK” field header will toggle all locks in the plan
 - Locking a district will stop the blocks from that district from being assigned to any other district.
- In a ward plan
 - Only the active municipality will be visible, however all the assignments are still in the plan for the other municipalities
 - Range Field – This will indicate (in red) if a specific ward meets the statutory requirements for the municipality, which is based on the overall population of the municipality.

Color	District	Persons	%District	Range	Persons18
	1 C - Adams	661	33.60%	300 to 1,000	484
	2 C - Adams	652	33.15%	300 to 1,000	463
	3 C - Adams	288	14.64%	300 to 1,000	241
	4 C - Adams	366	18.61%	300 to 1,000	306

- In a Supervisory plan
 - Deviation Field “Dev” – This will indicate how far from the population of a district is to the ideal population. The ideal population is found by dividing the county population by the number of specified districts. If a district count is not specified, then the number of districts that have been drawn is used.

Color	District	Persons	%District	Dev	Persons18
	Supervisory District 1	1,065	5.10%	21	841
	Supervisory District 2	1,058	5.07%	14	836
	Supervisory District 3	1,040	4.98%	-4	868
	Supervisory District 4	1,003	4.80%	-41	868
	Supervisory District 5	1,070	5.13%	26	980

Help and Comments

Please contact the LTSB-GIS team if you have any difficulties or issues. We also welcome any ideas and suggestions about how to improve this application.

LTSB-GIS:

Phone: 608-283-1001

Email: LTSB-GIS@legis.wisconsin.gov.